Kanekita`s original technology

The air pulse generation technology solves the clogging problem due to various kinds of powders.

This technology has received Japanese and United States patents. It is a newly developed magnet valve that generates a powerful air pulse instantly from compressed air without electrical control. As an Air Pulser, this technology is incorporated into the PUL BLAS®, PUL NOCKER® and PUL BLAS EZ Jr.® products. It is applied to inject a powerful air pulse into the hopper to fluidize to the powder clogging it, and to drive a piston to strike the outer wall of the hopper.

It is used as an Air Pulser in PUL BLAS®. The Air Pulser can be applied to various kinds of uses such as an air blaster valve.

Air Pulser is available in two types of materials:


Air Pulser made of aluminum

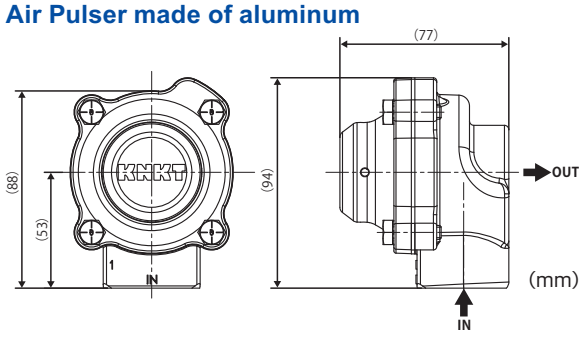

Air Pulser made of stainless steel

A product made of stainless steel is recommended for outdoor installations where corrosion resistance is required.

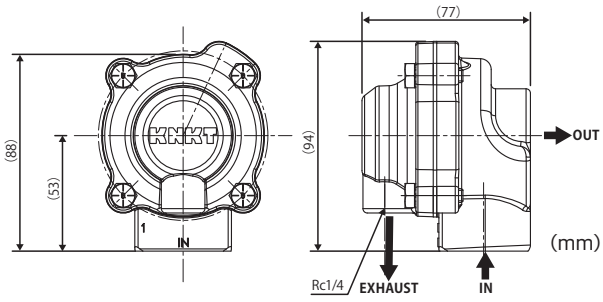
Product code	Product name
AP200000A0	Air Pulser AP20 IN/OUT Rc 3/4
AP250000A0	Air Pulser AP25 IN/OUT Rc 1
AP200000S0	Air Pulser made of stainless steel AP20 IN/OUT Rc 3/4
AP250000S0	Air Pulser made of stainless steel AP25 IN/OUT Rc 1

Dimensions

Air Pulser made of aluminum



Air Pulser made of stainless steel



PUL BLAS® PB-2 Series

The PUL BLAS® is recommended for eliminating bridges, rat holes or side wall build-up on vessel walls that may occur in various hoppers or tanks. The Air Pulser delivers maximum effect with minimum air quantity.

Features

Blast pulse air along the internal walls of hoppers.
- Effective air pulses ensure the fluidity of powder along the wall surfaces, improving powder flow.
- For specific applications, specially designed nozzles are available to eliminate wall deposits.

Driven only by compressed air
- No electrical devices such as solenoid valves or timers are needed to drive the machine.
- The air pulse interval can be adjusted with a speed controller.
  (The product is provided with a meter-out controller.)

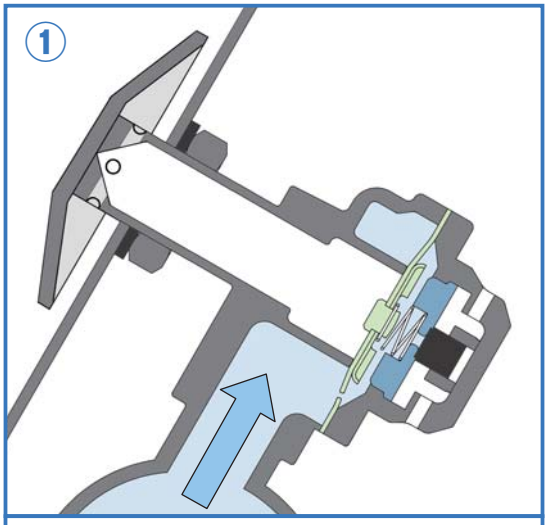
Silent operation
- The machine operates silently with no impact sound of hammer or piston.

Three types of air headers
- The union nut makes it easy to replace the air header, so the optimal air header can be selected to deliver the desired air flow depending on the state of clogging.

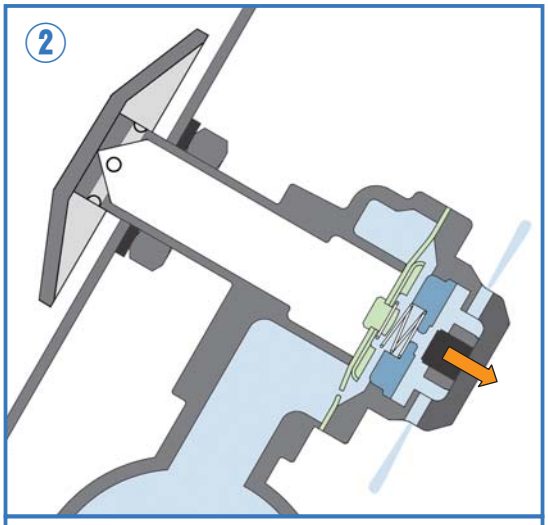
Stainless steel SUS 304 disc is provided as standard.
- Other metal materials are available, please contact to us.
  Note: When the stainless steel disc is used, there will be a clearance between the disc and the hopper wall.

Union nut connection
- The use of union nuts simplifies hopper connection and maintenance compared with the conventional product.

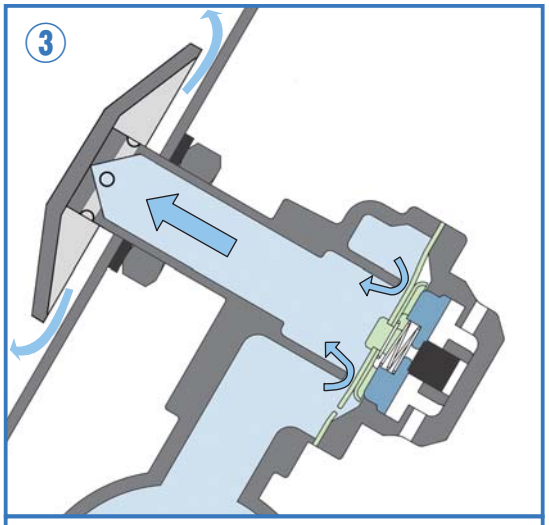
Principle of Operation



Compressed air (0.4 to 0.6 MPa) supplied by an air compressor flows through the air header and then diaphragm orifice, thereby filling the entire machine with air.

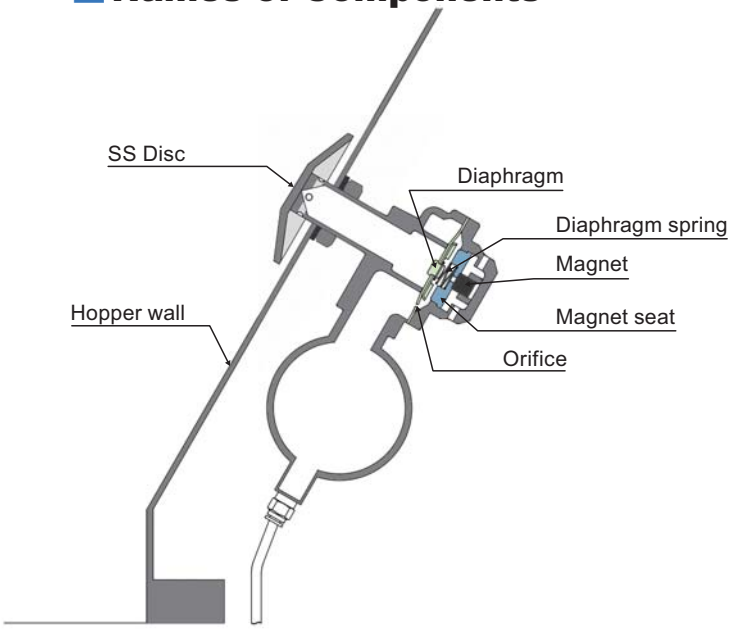


When the internal pressure of the machine rises to the point where the maximum magnetic attaching force is reached, the magnet valve is opened.



Opening of the magnet valve causes the compressed air charged in the Air Pulser and air header to push up the diaphragm and then flow into the hopper. This powerful air pulse eliminates clogging of powder.

Names of Components

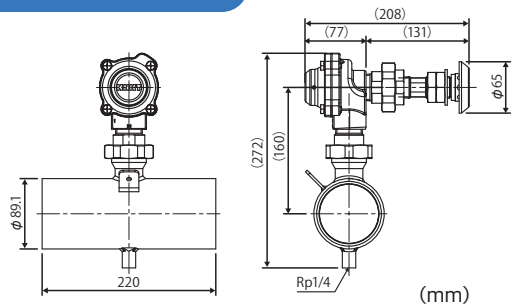


Specifications

Model	Supply pressure [MPa]	Connection tube [mm]	Mounting hole diameter [mm]	Operating interval [sec]	Air quantity [L/pulse]	Air header capacity [L]	Weight [kg]
PB-220	0.4~0.6	O.D. φ6 (I.D. φ4)	27	1~60	1.5~3.0	1.0	4.5 (Disc diameter 65mm) 4.6 (Disc diameter 80mm) 4.7 (Disc diameter 100mm)
PB-225	0.4~0.6	O.D. φ6 (I.D. φ4)	35	1~60	2.0~6.0	2.0	6.1 (Disc diameter 80mm) 6.2 (Disc diameter 100mm)

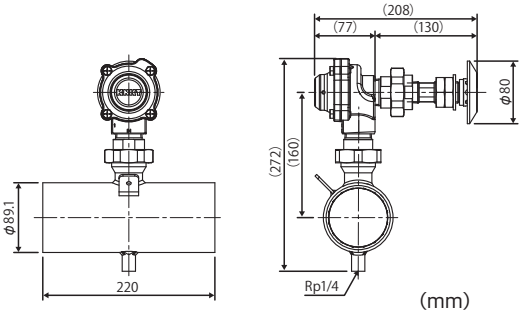
Note 1 : Be sure to use the product within the specified supply pressure range.
Note 2 : Use compressed air or inert gas as the driving source.
Note 3 : The operating interval should be set to 1 sec or longer per pulse.
Note 4 : The maximum operating temperature is 40℃.

Dimensions



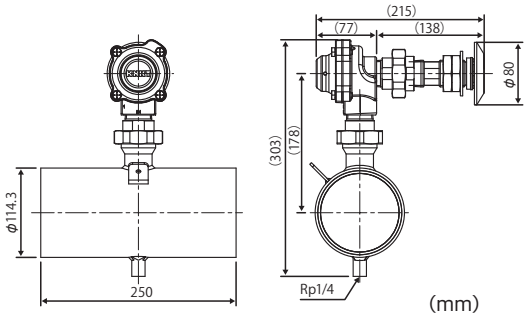
(mm)

PB220S6HA0



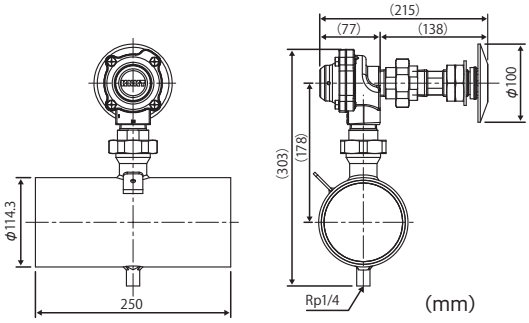
(mm)

PB220S8HA0



(mm)

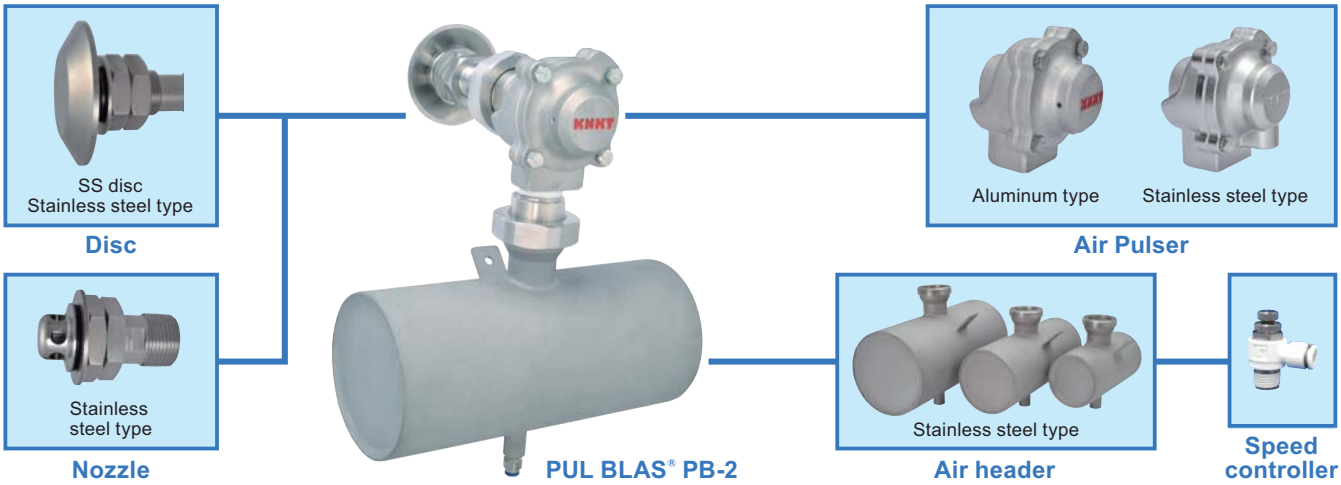
PB225S8HA0



(mm)

PB225S1HA0

Product Components



Product code

Product code	Product name
PB220S6HA0	PUL BLAS® PB220 SS disc 65MM
PB220S8HA0	PUL BLAS® PB220 SS disc 80MM
PB220S1HA0	PUL BLAS® PB220 SS disc 100MM
PB225S8HA0	PUL BLAS® PB225 SS disc 80MM
PB225S1HA0	PUL BLAS® PB225 SS disc 100MM

Product code	Product name
NS22030HL0	Nozzle stem NS220 3-way
NS22530HL0	Nozzle stem NS225 3-way
AH20500000	Air header 0.5L
AH21000000	Air header 1.0L
AH22000000	Air header 2.0L

*SS disc is available for following conical hopper

SS disc diameter	Inner diameter at the installation place
65mm	>240mm
80mm	>400mm
100mm	>600mm

* The PUL BLAS® air pulser body is made of aluminum. A stainless steel type is also available depending on the service conditions.
* The SS disc is made of stainless steel 304 and the seal material is PTFE.

PUL BLAS EZ Jr.® (EZ Junior)

Highly portable and easy-to-use bridge/rat hole breakers

Insert the nozzle into the powder contained in a hopper or storage tank from the top and inject air pulses to any clogged powder. This will make the powder flow easily, eliminating clogging. Ideal for small hoppers.

Features

Compact and light-weight
- Can easily be carried to the hopper location.
- No need to drill a hole in the hopper wall for installation.
- Ideal for movable hoppers.

Air Pulser mechanism
- The powerful air pulses injected from the nozzle eliminate powder clogging.

Driven only by compressed air
- No electrical devices such as solenoid valves or timers are needed to drive the machine.
- The air pulse interval can be adjusted with a speed controller.

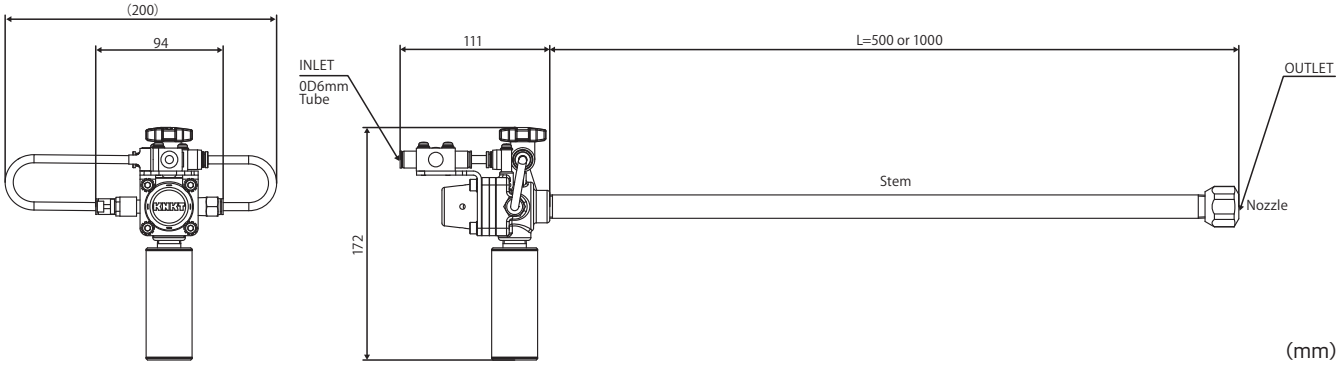
Air selector valve
- Operating the valve allows the air type to be selected between steady flow and pulsation. Can be used for various purposes including cleaning the inside of tanks.

Basic Specifications

Power source: Compressed air
Supply pressure: 0.4 to 0.6 MPa
Nozzle and stem material: Stainless steel SUS304
Weight: 1.3kg (L=500mm)

Note 1 : Use the product within the specified supply pressure range.
Note 2 : The operating interval should be set to 1 sec or longer per pulse.

Dimensions



(mm)

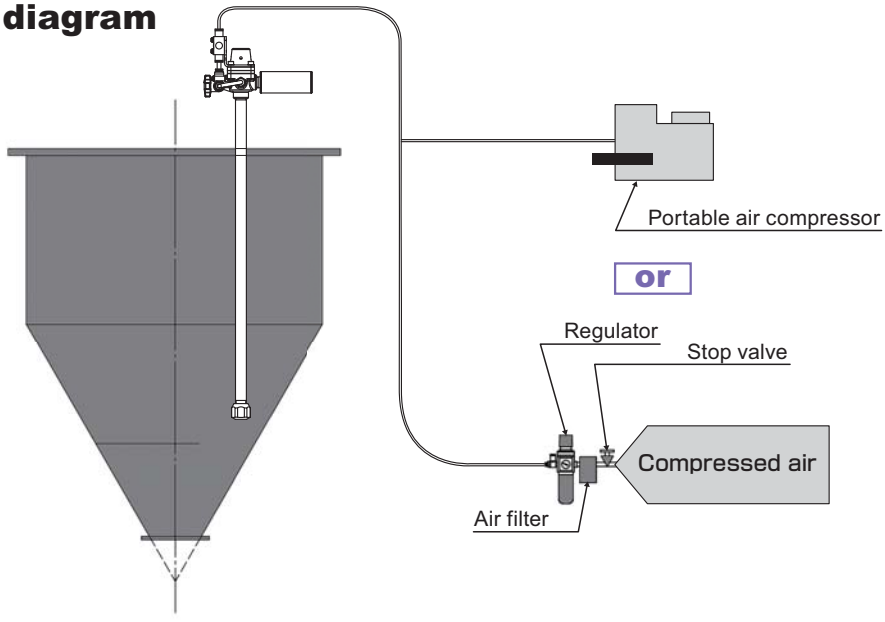
Product code

Product code	Product name
EZJ050A1E0	PUL BLAS EZ Jr.®, 500mm
EZJ100A1E0	PUL BLAS EZ Jr.®, 1000mm

Note 1 : Handle with care and do not point the tip of the nozzle toward a person during operation.
Note 2 : Wear personal powder protection equipment including safety goggles during work.

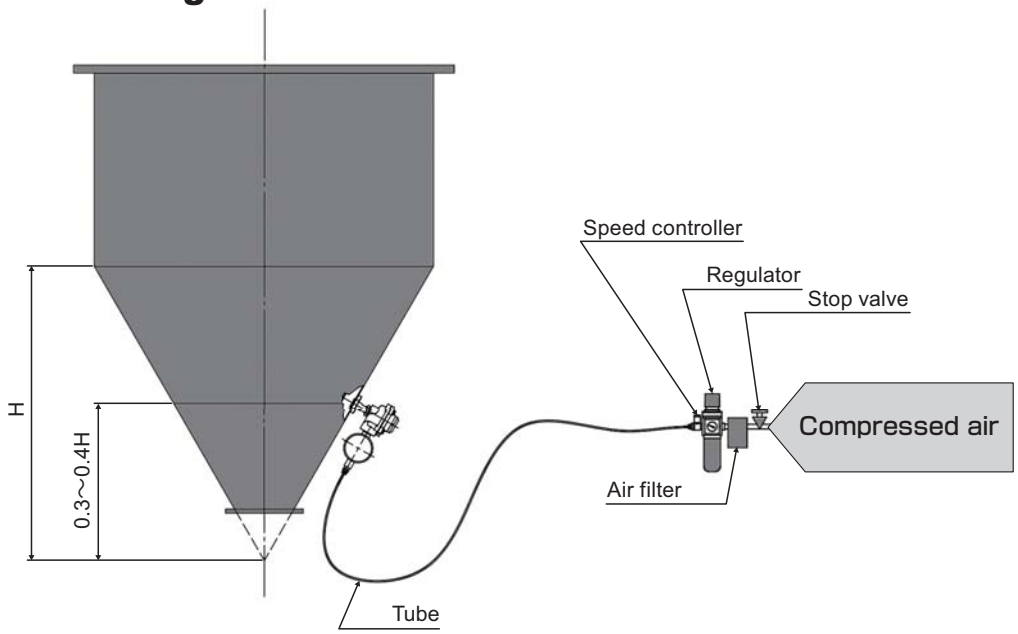
Installation example

Connection diagram



Installation examples

Connection diagram



Installation photos